

Appl. No. 09/619,973

Amendment Dated February 19, 2004

Reply to Office Action of November 19, 2003

Remarks:

Reconsideration of the application is requested. Claims 1-9 remain in the application. Claims 2, 3, 5, 7, and 9 have been amended.

In item 1 of the Office action, the Examiner objected to specification for using the phrase "Fig. 1a" instead of --Fig. 1A--. In addition to the instance cited by the Examiner, several additional occurrences were also corrected.

In item 2 of the Office action, the Examiner objected to claim 2 for containing confusing sentences. Claim 2 has been amended along the lines suggested by the Examiner.

In item 3 of the Office action, the Examiner objected to claim 5. As suggested "signal-delta modulator" has been changed to --sigma-delta modulator--.

In item 5 of the Office action, the Examiner rejected claim 1 as being obvious over Co et al. in view of Yamaji et al. under 35 U.S.C. § 103(a). As will be explained below, the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references.

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Before discussing the prior art in detail, a brief review of the invention as claimed is provided. Claim 1 calls for, *inter alia*, a digitally controlled circuit having the following features:

a multiphase clock generator producing n phases of a clock being m -times the given signal;

a multiplexer connected to said multiphase clock generator and having n inputs for receiving the n phases of the clock, said multiplexer having one output supplying an output signal;

a phase comparator having inputs receiving the output signal of said multiplexer and the given signal, and generating a compared output signal; and

a sigma-delta modulator connected to said phase comparator and receiving said compared output signal, said sigma-delta modulator generating correction commands used for controlling said multiplexer.

The subject matter of present claim 1 differs from Co et al.

'750 in two features.

First, in claim 1, a sigma-delta-modulator is disclosed. Co et al. do not disclose a sigma-delta-modulator, but rather an up/down counter.

Second, in claim 1, the phase comparator receives different signals. In the prior art, the phase comparator receives the same signal.

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According to claim 1, the "phase comparator has inputs receiving the output signal of said multiplexer and the given signal." The signal (REF-CLK) is passed to the multiplexer from the multiphase clock generator and is m-times the given signal (SYNC).

In contrast, the prior art teaches the input of the input divider and the multi-phase clock generator are identical because they both receive the same signal (Rx CLK).

The difference in signals is further explained with reference to Fig. 5 of Co et al. In Fig. 5 of Co et al., the input signal must be the first write clock W0. However, the first write clock W0 is derived from the reference signal Rx CLK, which is also input to the multiphase clock generator. In Fig. 5 of Co et al., signal XTAL IN and signal Rx CLK are identical. The first write clock W0 is generated by dividing the reference signal Rx CLK. Therefore, the reference signal Rx CLK input into the multiphase clock generator is m-times ($m = 64$) of the first write clock W0, however, only because the first write clock W0 is not independent from the clock of the reference signal.

Accordingly, none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Therefore, claim 1 is patentable over the art.

App. No. 07/017,913

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In item 6 of the Office action, the Examiner objected to claims 3-9 for depending on a rejected base claim but indicated that they contained allowable subject matter. Claims 3-9, as well as claim 2, have been rewritten as independent claims. Accordingly, claims 2-9 should be allowable.

In view of the foregoing, reconsideration and allowance of claims 1-9 are solicited. In the event the Examiner should still find any of the claims to be unpatentable, please telephone counsel so that patentable language can be substituted.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,



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